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Systems and software engineering — Information technology project performance benchmarking framework —

Part 3: Guidance for reporting

Ingénierie des systèmes et du logiciel — Cadre de conduite de tests de performance de projet de technologies de l'information —

Partie 3: Directives de rapport

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

ISO/IEC 29155 consists of the following parts, under the general title *Systems and software engineering — Information technology project performance benchmarking framework*:

— *Part 1: Concepts and definitions*

— *Part 2: Requirements for benchmarking*

— *Part 3: Guidance for reporting*

— *Part 4: Guidance for data collection and maintenance*

Further parts might follow.

Annex A of this part of ISO/IEC 29155 is for information only.

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Introduction

Benchmarking is an activity of comparing objects of interest to each other or against a benchmark to evaluate characteristic(s). In the context of the ISO/IEC 29155 series, the "object of interest" is the performance of information technology (IT) project, and the characteristic is a particular aspect of an IT project such as productivity.

The benchmarking is one of the fastest-growing techniques in the area of IT project management. Instances of IT project performance benchmarking are initiated and conducted for various reasons. Among the most common reasons are

a) the need to compare project productivity between similar industries,

b) the need to compare productivity between different project types and technologies,

c) the need to find the most effective targets for IT development process improvement,

d) the need to compare productivity between different suppliers,

e) the need to improve project management maturity,

f) the need to improve project estimation capability.

Much has been written regarding the trials of establishing IT project performance benchmarking, and statistics bear witness to the high failure rate of measurement and benchmarking programs. The most probable causes for failure have been disappointment in the benchmarking outcomes due to a lack of alignment between the selected measurements and business goals, and the misunderstanding of project level measurements in relation to program and portfolio management levels. When there is no alignment between executed measurements and provided outcomes, unnecessary effort is required from the IT project teams collecting the project data. The result is decreased motivation to continue and institutionalize benchmarking.

As shown in Figure 1, ISO/IEC 29155 series consists of multiple parts:

— Part 1 provides the overall framework model for IT project performance benchmarking. It consists of activities and components that are necessary to successfully identify, define, select, apply, and improve benchmarking;

— Part 2 prescribes the required tasks in individual benchmarking activities that are necessary to execute various activities to conduct and/or support successful benchmarking in an organization;

— Part 3 prescribes the guidance for reporting processes and contents of typical reports;

— Part 4 provides guidance for the activities to collect IT project data to be entered into and maintained in a benchmarking repository.

Further parts might follow.

This part of ISO/IEC 29155 is intended to provide guidance for reporting process and contents of typical reports in IT project performance benchmarking to produce high-quality deliverables (e.g. the benchmarking report of an instance of benchmarking, the explanatory report for issued benchmarks, and the explanatory report for released benchmarking repository) which include sufficient information to avoid misunderstanding or inappropriate usage.

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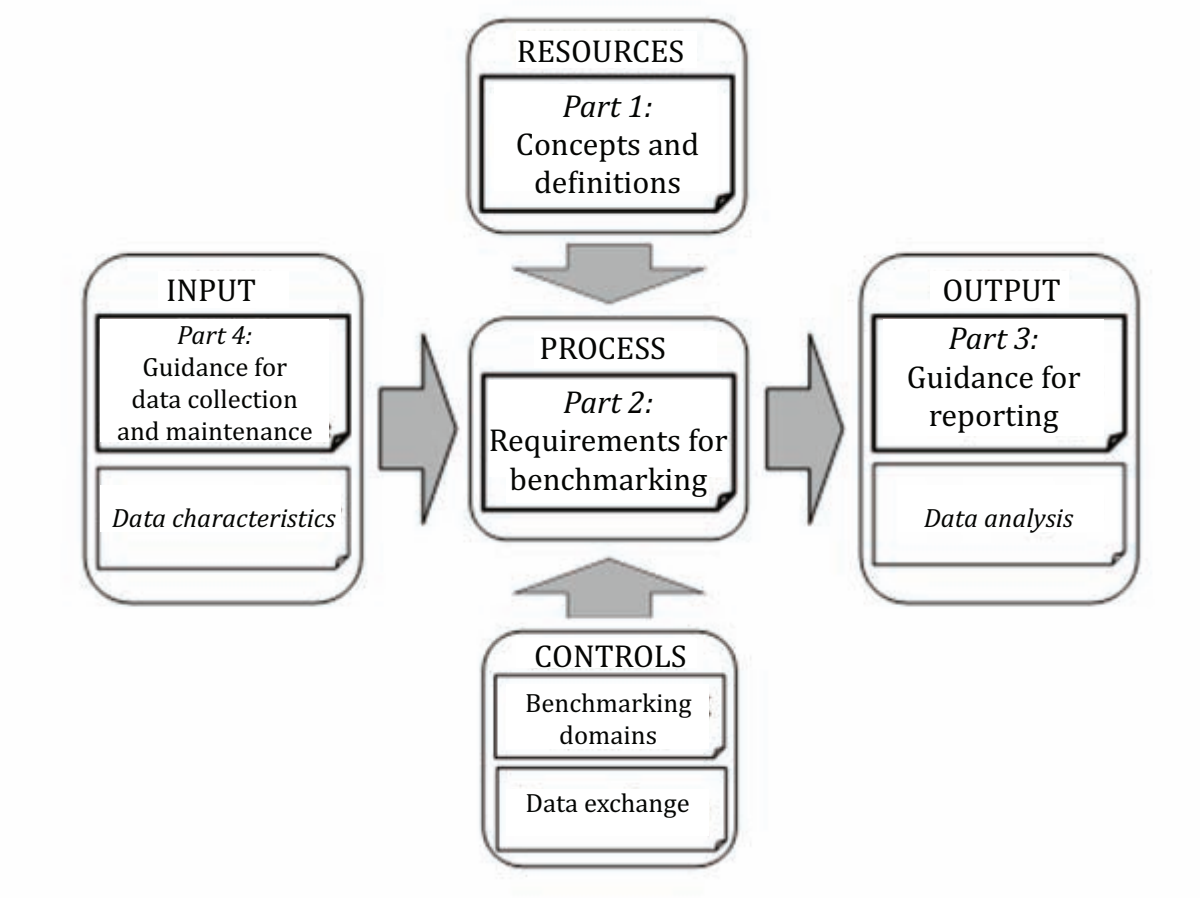


Figure 1 — IT project performance benchmarking standards overview

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Systems and software engineering — Information technology project performance benchmarking framework —

Part 3: Guidance for reporting

1 Scope

This part of ISO/IEC 29155 provides general requirements and guidance for reporting processes and contents of typical reports within benchmarking activities of "the information technology (IT) project performance benchmarking framework" by prescribing:

— requirements and guidance for the reporting processes within the benchmarking framework;

— requirements and guidance for the contents of reports.

This part of ISO/IEC 29155 focuses on three major activities, i.e. "conduct benchmarking", "maintain repository", and "issue benchmarks" activities.

NOTE 1 These activities are selected, not only because the importance of the outcomes of these activities, but also the outcomes of these activities are the direct input for benchmarking users who execute "core benchmarking" activities. In addition, benchmarking users are not usually so deeply involved to these activities even though they need in-deep information to understand the benchmarking results or to select appropriate data (i.e. benchmarking repository and benchmarks).

This part of ISO/IEC 29155 also focuses on two types of reports in the benchmarking framework:

a) the benchmarking report, that describes the results of an instance of benchmarking;

b) the explanatory report, that provides complementary information about the released benchmarking repository or benchmark(s).

This part of ISO/IEC 29155 is intended for use by stakeholder(s) of IT project performance benchmarking (e.g. benchmarking user, benchmark provider, and benchmarking service provider).

NOTE 2 The following are examples of how this part of ISO/IEC 29155 can be used:

— by a systems and software acquirer (or a third-party agent), to define, order, obtain and evaluate an acceptable and creditable benchmarking report;

— by a benchmarking service provider, to produce a high-quality benchmarking report;

— by a benchmark provider, to provide complementary information about the released benchmarking repository or issued benchmarks.

It is out of the scope of this part of ISO/IEC 29115 to prescribe the particular names, formats, or explicit contents of the reports of the benchmarking activities.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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ISO/IEC 29155-1, *Systems and software engineering — Information technology project performance benchmarking framework — Part 1: Concepts and definitions*

ISO/IEC 29155-2, *Systems and software engineering — Information technology project performance benchmarking framework — Part 2: Requirements for benchmarking*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 29155-1, ISO/IEC 29155-2, and the following apply.

3.1
benchmarking analyst
person or organization that executes "conduct benchmarking" activity

3.2
benchmarking report
document of the results of an instance of benchmarking

Note 1 to entry: Document usually consists of various formats (e.g. textual descriptions, numeric values, statistical charts and tables), and is exchanged via various media (e.g. electronic documents, electronic data set, printed documents, and embedded data within specific computer software).

3.3
core report
document for providing descriptions of the process and outcomes of the benchmarking activity

Note 1 to entry: Two kinds of core reports (i.e. executive summary and detailed report) are often produced for reporting results of an instance of benchmarking activity.

3.4
explanatory report
document attached to a product for providing complementary information in order to assist understanding and to avoid inappropriate usage of the product

Note 1 to entry: Examples of an explanatory report are data element definitions, data demographics, data source information which are attached to benchmarking repositories or benchmarks.

Note 2 to entry: Examples of the product are benchmarking repository, benchmark(s), or software tools to support benchmarking activities.

4 Abbreviated terms

IT Information Technology

5 Roles of reports in the IT project performance benchmarking framework

5.1 General quality requirements for the benchmarking reports

As shown in Figure A.1, IT project performance benchmarking framework in ISO/IEC 29155 series consists of two categories of benchmarking activities:

— core benchmarking activities (i.e. "conduct benchmarking" and "utilize benchmarking results");

— supporting activities (i.e. "maintain repository", "issue benchmarks", "measure IT project", "submit data", and "provide instruments").

NOTE 1 See ISO/IEC 29155–1 and ISO/IEC 29155–2 for more information about activities, processes and tasks in the benchmarking framework.

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